

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-20. (canceled)

21.(previously presented) A module for coupling a telephone device to at least one time-domain multiplexed digitized voice channel carried over a wiring having at least two conductors, the module comprising:

a modem operative to couple to the signal carried over the wiring;

selective means coupled to said modem and operative to pass a first voice channel;

a subscriber line interface coupled to said selective means and operative to convert said first voice channel to a first analog telephone signal; and

a first telephone connector coupled to said subscriber line interface and couplable to a telephone device to couple the telephone device to said first analog telephone signal.

22.(previously presented) The module according to claim 21, wherein at least part of the wiring is existing wiring in a building.

23. (previously presented) The module according to claim 22, wherein the wiring is used to concurrently carrying a service signal.

24. (previously presented) The module according to claim 23, wherein the wiring is a telephone wiring.

25. (previously presented) The module according to claim 22, wherein the module is attachable to a wall.

26. (previously presented) The module according to claim 25, wherein the module is at least in part housed within an outlet.

27. (previously presented) The module according to claim 21 wherein the wiring concurrently carries a frequency domain multiplexed second analog telephone signal in a telephone band, and the module further comprises:

 a frequency selective means couplable to the wiring and operative to pass the said second analog telephone signal;
and

a second telephone connector coupled to said frequency selective means for coupling a telephone device to said second analog telephone signal.

28. (previously presented) The module according to claim 21, wherein the multiplexed digitized voice channels carry Pulse Code Modulation (PCM) signals.

29. (previously presented) The module according to claim 21, wherein the wiring further carry data signals, and the module further comprises a data connector operative to couple the data signals to a data unit.

30. (previously presented) A module for coupling at least one telephone service signal to at least one time-domain multiplexed digitized voice channel carried over a wiring having at least two conductors, the module comprising:

at least one exchange line interface couplable to said at least one telephone service signal, and operative to convert said at least one telephone service signal to a digitized service signal ,

a modem coupled to said at least one exchange line interface and operative to couple said digitized service signal to the signal carried over the wiring.

31.(previously presented) The module according to claim 30, wherein the module is used for coupling multiple service signals to multiple time-domain multiplexed digitized voice channels carried over the wiring, and wherein the module further comprising selective means coupled to said modem and to said at least one exchange line interface and operative to selectively couple said multiple digitized voice channels carried over the wiring to said digitized service channels.

32.(previously presented) The module according to claim 30, wherein at least part of the wiring is existing wiring in a building.

33.(previously presented) The module according to claim 32, wherein the wiring is used to concurrently carrying a service signal.

34.(previously presented) The module according to claim 33, wherein the wiring is a telephone wiring.

35.(previously presented) The module according to claim 32, wherein the module is attachable to a wall.

36.(previously presented) The module according to claim 35, wherein the module is at least in part housed within an outlet.

37.(previously presented) The module according to claim 30, wherein the wiring concurrently carries a frequency domain multiplexed analog telephone signal in a telephone band, and the module further comprises:

a connection means for coupling to an analog telephone service; and

a frequency selective means coupled to said connection means and couplable to the wiring , and operative to pass the analog telephone signal.

38.(previously presented) The module according to claim 30, wherein the multiplexed digitized voice channels carry Pulse Code Modulation (PCM) signals.

39.(previously presented) The module according to claim 30, wherein the wiring further carry data signals, and the module

further comprises a data connector operative to couple the data signals to a data unit.

40. (previously presented) A network for coupling at least one telephone service signal to at least one telephone device over a wiring, the network comprises:

a wiring having at least two conductors for carrying multiple time-domain multiplexed digitized voice channels;

an exchange side device coupled to the wiring and operative to couple at least one telephone service signal to at least one digitized voice channel; and

at least one subscriber side device coupled to the wiring and operative to couple the at least one telephone device to at least one digitized voice channel.

41. (previously presented) The network according to claim 40, wherein at least part of the wiring is in a building.

42. (previously presented) The network according to claim 41, wherein the wiring is used to concurrently carrying a service signal.

43. (previously presented) The network according to claim 42, wherein the wiring is a telephone wiring.

44.(previously presented) The network according to claim 41, wherein the at least one subscriber side device is attachable to a wall.

45.(previously presented) The network according to claim 44, wherein the at least one subscriber side device is at least in part housed within an outlet.

46.(previously presented) The network according to claim 40, wherein the wiring concurrently carries a frequency domain multiplexed analog telephone signal in a telephone band, and wherein the at least one subscriber side device is operative to couple the at least one telephone device to said analog telephone signal.

47.(previously presented) The network according to claim 40, wherein the multiplexed digitized voice channels are carry Pulse Code Modulation (PCM) signals.

48.(previously presented) The network according to claim 40, wherein the network is connected to at least two distinct telephone service providers.

49. (previously presented) The network according to claim 40, further comprising a plurality of subscriber side devices, each coupled to the wiring in a distinct connection point.

50. (previously presented) A method for upgrading existing wiring in a building having at least two conductors to allow for coupling at least one telephone service signal to at least one telephone device over the wiring, the method comprising the steps of:

coupling an exchange side device to the wiring, the exchange side device being operative to couple at least one telephone service signal to a digitized voice channel; and

coupling at least one subscriber side device to the wiring, the subscriber side device being operative to couple at least one telephone device to the digitized voice channel;

wherein the wiring is operative to carry multiple time-domain multiplexed digitized voice channels.

51. (previously presented) The method according to claim 50, wherein there are at least two subscriber side devices, each coupled to the wiring at a respectively different connection point.

52. (previously presented) The method according to claim 51, wherein the wiring is used to concurrently carrying a service signal.

53. (previously presented) The method according to claim 52, wherein the wiring is a telephone wiring.

54. (previously presented) The method according to claim 51, wherein the at least one subscriber side device is attachable to a wall.

55. (previously presented) The method according to claim 54, wherein the at least one subscriber side device is at least in part housed within an outlet.

56. (previously presented) The method according to claim 50 wherein the wiring concurrently carries a frequency domain multiplexed analog telephone signal in a telephone band, and wherein the at least one subscriber side device is operative to couple a telephone device to said analog telephone signal.

57. (previously presented) The method according to claim 50, wherein the multiplexed digitized voice channels carry Pulse Code Modulation (PCM) signals.

58.(previously presented) The method according to claim 50, further comprising the step of connecting at least two distinct telephone service providers to the exchange side device.

59.(previously presented) For use with first and second wiring segments, each segment having at least two conductors and each segment carrying a plurality of time-domain multiplexed digitized voice channels, a module for coupling a telephone device to said wiring segments, the module comprising:

first and second modems each couplable to a respective one of said first and second wiring segments and each operative to couple to a respective one of the signals carried over the first and second wiring;

selective means coupled to said first and second modems and operative to select one voice channel ;

a subscriber line interface coupled to said selective means and operative to convert said one voice channel to a first analog telephone interface; and

a first telephone connector coupled to said subscriber line interface and operative to couple the telephone device to said first analog telephone interface.

60. (previously presented) The module according to claim 59, wherein at least part of one of said wiring segments is existing wiring in a building.

61. (previously presented) The module according to claim 60, wherein at least one of said wiring segments is used to concurrently carrying a service signal.

62. (previously presented) The module according to claim 59, wherein at least one of said wiring segments is a telephone wiring.

63. (previously presented) The module according to claim 60, wherein the module is attachable to a wall.

64. (previously presented) The module according to claim 63, wherein the module is at least in part housed within an outlet.

65. (previously presented) The module according to claim 59, wherein at least one of said wiring segments concurrently carries a frequency domain multiplexed second analog telephone signal in a telephone band, and the module further comprises:

a frequency selective means couplable to the wiring and operative to isolate said second analog telephone signal; and

a second telephone connector coupled to said frequency selective means and operative to couple a telephone device to said second analog telephone signal.

66.(previously presented) The module according to claim 59, wherein the multiplexed digitized voice channels carry Pulse Code Modulation (PCM) signals.

67.(previously presented) The module according to claim 59, wherein at least one of said wiring segments further carries data signals, and the module further comprises a data connector operative to couple a data unit to the data signals.

68.(previously presented) A network for carrying multiple voice channel over a wiring, the network comprising:

at least two wiring segments, each segment having at least two conductors and each segment carrying at least one time-domain multiplexed digitized voice channel;

wherein each wiring segment connects two coupling devices, each coupling device being couplable to at least one telephone device, and being operative to couple the at least

one telephone device to at least one digitized voice channel carried over the respectively connected wiring segment; and

at least one coupling device is connected to at least two wiring segments.

69.(previously presented) The network according to claim 68, wherein the at least one coupling device connected to at least two wiring segments transports at least one time-domain multiplexed digitized voice channel from one wiring segment to another wiring segment connected thereto.

70.(previously presented) The network according to claim 68, wherein at least part of at least one of the wiring segments is in a building.

71.(previously presented) The network according to claim 68, wherein at least one of the wiring segments is used to concurrently carrying a service signal.

72.(previously presented) The network according to claim 71, wherein at least one of the wiring segments is a telephone wiring.

73. (previously presented) The network according to claim 70, wherein the at least one device is attachable to a wall.

74. (previously presented) The network according to claim 73, wherein the at least one device is at least in part housed within an outlet.

75. (previously presented) The network according to claim 68, wherein at least one of the wiring segments concurrently carries a frequency domain multiplexed analog telephone signal in a telephone band, and wherein at least one of the coupling devices is operative to couple an associated telephone device to said analog telephone signal.

76. (previously presented) The network according to claim 68, wherein the multiplexed digitized voice channels carry Pulse Code Modulation (PCM) channels.

77. (previously presented) The network according to claim 68, wherein the network is further coupled to at least one telephone service signal.

78. (previously presented) The network according to claim 77, wherein the network is connected to at least two distinct telephone service providers.

79. (new) For use with an existing wiring infrastructure in a building, the wiring infrastructure having a service wire pair and the building having a wall provided with an outlet cavity into which the service wire pair extends, a device for coupling an analog voice unit to a digital data unit said device comprising:

- a single enclosure;

- a data port couplable to a digital data unit for conducting a digitized voice signal;

- a transceiver coupled to said data port for conducting the digitized voice signal;

- a converter coupled to said transceiver for converting the digitized voice signal to an analog voice signal; and

- a voice connector coupled to said converter and connectable to an analog voice unit, for conducting the analog voice signal to the analog voice unit, wherein

said data port, said transceiver, said converter and said voice connector are all housed in said single enclosure, said enclosure is attachable to the outlet cavity.

80. (new) The device according to claim 79, wherein said data port comprises a standard data connector.

81. (new) The device according to claim 79, wherein said device is attachable and connectable to an outlet that is installed in the outlet cavity and to which the service wire pair is connected.

82. (new) The device according to claim 79, wherein said single enclosure is an outlet installed in the outlet cavity and to which the service wire pair is connected.

83. (new) The device according to claim 79, wherein the wiring infrastructure carries multiple digitized voice channels, said the device further comprises a selector coupled between said transceiver and said converter, said selector being operative to select a single digitized voice channel from the multiple channels and to couple only the selected channel to the converter.

84. (new) The device according to claim 79, wherein the digitized voice signal is a telephone signal, the analog voice signal is an analog telephone signal, said voice connector is

Appln. No. 09/594,765
Prelim. Amd. dated December 23, 2003

a standard telephone connector, and the analog voice unit is
an analog telephone set.